0003

Incoming
C/025/0005

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From: "Chris McCourt" <CMcCourt@altoncoal.com>
To: "Pete Hess" <petehess@utah.gov>
CC: "Priscilla Burton" <priscillaburton@utah.gov>
Date: 2/4/2009 5:50 PM
Subject: RE: Revised Appendix 5-1
Attachments: Taylor Geo-Engineering Page 5-9.pdf

Pete,

Attached is Page 5-9 from the Taylor Geo-tech Report. I am not sure why it is missing in that copy.

Let me know if you need anything else.

Thanks,

Chris

From: Pete Hess [mailto:petehess@utah.gov]
Sent: Wednesday, February 04, 2009 2:26 PM
To: Chris McCourt
Cc: Priscilla Burton
Subject: Revised Appendix 5-1

Chris...

Page 5-9 of the Taylor Geo-Tech report is missing....

Please scan and E-mail me the missing page would you ?

Thanks.

pile will consist of soils from above the coal layer, the strength characteristics of the sandy clay, and fat clay from CH-1-3 and CH-5-48 were averaged to verify the stability of the slopes under static and seismic conditions. The average strength characteristics were reduced 10 percent to account for weakened strengths of materials placed to 85 percent of the standard Proctor.
Slope stability analyses for proposed Sedimentation Ponds #1, #1B, #2, and #4 used strength parameters obtained from sample SP-16-13, since the pond embankments in those areas will be constructed of soils representative of SP-16-13. The analyses considered a maximum slope height of 15 feet, even though not all the ponds will have slopes extending to 15 in height.

The slope stability analysis for the sedimentation Pond #3 embankment was completed using the soil unconfined compression strengths from samples obtained from boring GT-5. Laboratory testing indicated unconfined compressive strength of 9429 psf or a cohesive strength of 4700 psf. For stability purposes a cohesion of 700 psf and a friction angle (ø) of 10 degrees was utilized for static and seismic analyses. The strength values were conservatively reduced to assumed total stress parameters of 300 psf and 8 degrees for the rapid drawdown analysis.

Locations from which the cross-sections for the each of the slope analyses were taken from are shown on Figures 11 through 15, Appendix D. Lines A1-A1, A2-A2, B1-B1 and B2-B2 for the excess spoil pile are shown on Figure 11, Line F-F for the sedimentation ponds is shown on Figure 15, and Line E-E for Pond #3 is shown Figure 14. Profile views with the accompanying output files for each of the static and seismic slope stability analyses are shown on, Figures 16 through 37, in Appendix E, Profile Views and Output Files of Static and Pseudo-static Slope Stability Analyses.

5.1 Excess Spoil Structure

Based on the information provided, TGE understands the excess spoil structure will be a permanent structure after mining operations are complete. The proposed structure has been designed with maximum 3:1 (horizontal: vertical) slopes. As shown on Figure 11, Proposed Embankment Design, embankment height will vary from 75 feet at the east end to 120 feet at the west end.. The top of the embankment will descend to the northwest at a 2.2 percent grade.

The embankment will be comprised of soil deposits that overlie the coal bed to be removed during mining operations. Although the soils will likely consist of a mixture of silt, clay, sand, and shale, the stability analyses considered the materials separately. The analyses assume the materials will be compacted to at least 85 percent of the standard Proctor.

The subsurface information indicates that the subsurface profile varies between the area of GT-2/GT-3 and GT-5. Therefore, four stability analyses were performed representing Line A1-A1, A2-A2. Line B1-B1 and Line B2-B2, Figure 11. Additionally, TGE analyzed the spoil pile having a finished height of 120 feet in the area of the west end of the structure and 100 feet for the central portion of the structure and 75 to 86 feet for the east end of the structure.